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ARIZONA LABOR MARKET INFORMATION

NEWSLETTER

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September 1990

Unemployment Rate

Seasonally Adjusted
July *

ARIZONA	–	5.4%
Maricopa Co.	–	4.5
Pima Co.	–	4.2
United States	–	5.5

Consumer Price Index

U.S. – July 1990
Base = 1982-84

Wage Earner/Clerical Worker	–	128.7
% Chg. Year Ago	–	4.5
All Urban	–	130.4
% Chg. Year Ago	–	4.8

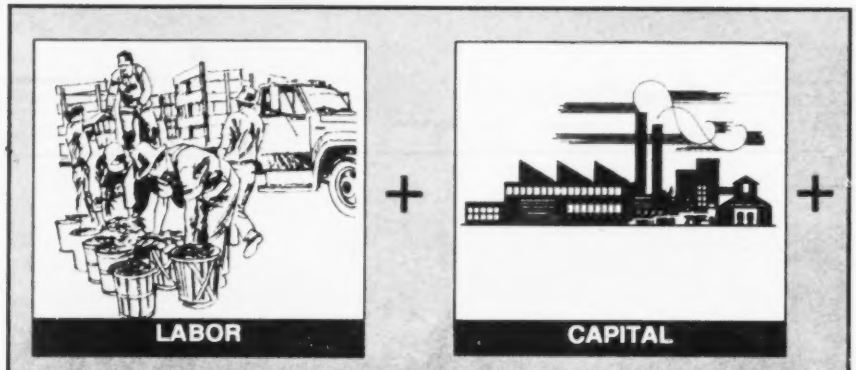
Phoenix – 2nd Qtr 1990
Base = 1982-84

All Urban	–	131.8
% Chg. Year Ago	–	4.7

Tueson – 2nd Qtr 1990
Base = 1982-84

All Urban	–	127.5
% Chg. Year Ago	–	1.8

* Preliminary



Clearing the Air

Although Synonymous with Productivity, Labor is Only One of Several Variables in BLS' Equation

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Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

U.S. Labor Could be Getting Bad Rap in Productivity Debate

Other Factors — Management, Capital — Make Up Part of BLS' Measurements

Is America's labor force primarily responsible for a decline in U.S. productivity growth over the past few decades? You might assume so, judging by frequent attacks in recent years on the quality of U.S. labor.

It's not uncommon to hear or read something like the following: "If American workers don't shape up, we're all going to suffer lower living standards as global competition outpaces our productivity."

Critics of U.S. labor often cite worker laziness, diminished work ethic, and lack of skills as prevailing reasons for falling productivity. In fact, the term productivity as it is most commonly used is taken to be synonymous with *labor* productivity.

Perhaps because the Labor Department's Bureau of Labor Statistics (BLS) publishes the nation's productivity statistics, many think of productivity only in *labor* terms. A more likely reason, however, is the fact that the most commonly used measures of productivity are expressed in terms of "output per unit of labor (persons)," even though "management (also persons)" and "capital inputs" are also part of the productivity equation.[1]

To guard against confusion, BLS always publishes a caveat as a footnote to its productivity statistics. It says in part: " ... Although these measures relate output to hours at work of all persons engaged in a sector, they do not measure the specific contribution of labor, capital, or other factors of production. Rather, they reflect the joint effects of many influences, including changes in technology; capital investment; level of output; utilization of capacity, energy, and materials; the organization of production; managerial skill; and the characteristics and effort of the work force."[2]

So, BLS makes it clear that many factors influence productivity. Yet, how often do you hear that this country needs to improve its *capital* or *management* productivity if it's going to keep pace with increased global competition?

Capital Productivity

Just what is capital productivity? Fundamentally, it's the ratio of *output* to *dollar of capital invested* (which includes capital stock used in production).[3] Some of the primary capital inputs are land, buildings, equipment, accounts receivable, inventory, and cash on hand.

Although the greatest improvement to capital productivity comes with technological innovation,[4] some relatively new players in capital markets — the corporate raiders and greenmailers — claim to have found another way to increase capital productivity.

These takeover groups say they have raised capital productivity of U.S. companies through their activities of leveraged buyouts, or even just the threat of leveraged buyouts (greenmail). Raiders make this claim despite increasing the raided firms' debt burdens many times.[5]

Capital productivity in this context seems to mean the dollar return on investment to raiders and stockholders, not output produced per unit of capital. In fact, each unit of output the raided companies continue to produce must come at a higher capital cost. That lowers — not raises — capital productivity.

> ***" ... how often do you hear that this country needs to improve its capital or management productivity if it's going to keep pace with increased global competition? "***

Corporate raiders merely turn equity into debt or liquidate assets, distribute part of the revenue raised to stockholders, and leave the raided firms in a weakened financial condition. Little or no use of the raised capital is put toward expanding the means of production, such as buying new and improved equipment.[6]

When one considers that the fundamental equation of macroeconomics is *Income = Output*,[7] if we as a nation are not increasing our output, we cannot expect our nation's income to rise. Even with a stable level of output, per-capita income will fall if the population is growing. Therefore, we should be looking for a means to increase "real" output and the efficiency of capital, management, and labor.

Management Productivity

At both the microeconomic and macroeconomic level, the ratio of *output* to *input* is the most fundamental measure of productivity.[8] That is, the more output a company can get per unit of input — whether it's capital, materials, or labor — the higher its productivity.

At the national level, the more output the nation can get from

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Table 1. **Annual Indexes of U.S. Productivity in Selected Years, and Annual Average Percentage Change in Productivity by Decade and 1989**

	Output per Hour of All Persons (1977 = 100)					Percentage Change			
	1960	1970	1980	1988	1989	1960s	1970s	1980s	1989
Business	66.1	87.6	99.4	113.0	114.2	3.25	1.35	1.65	1.06
Nonfarm Business	69.5	88.4	99.0	111.1	112.1	2.72	1.20	1.47	0.90
Nonfinancial Corps	71.9	90.2	99.3	114.7	114.8	2.55	1.01	1.73	0.09
Manufacturing	60.7	80.2	101.7	136.0	138.7	3.21	2.68	4.04	1.99

Source: U.S. Department of Labor, Bureau of Labor Statistics

(Continued from page 2)
its stock of land, labor, and capital, the more productivity increases. Considering that it's management's responsibility to allocate and monitor resources for maximum productivity,[9] management may deserve some of the blame if productivity falls.[10]

It's easy to understand that one laborer with a hand shovel cannot match the productivity of another with a power shovel, regardless of the robustness of the first laborer's work. It's harder, however, to discern the relative effectiveness of one clerical worker to another unless the organizational structure (i.e., time allocated to a project, quality of work desired) they work under is defined.

As Henry Ford demonstrated with assembly lines a hundred years ago, organizational structure can have as much an influence on relative productivity as the power tool over the hand tool. It's management's job to determine what tools workers will have and what organizational structure they will work under.

Managers can influence productivity in a number of ways, in addition to providing more effective tools and organizations. For example, they can alter production inputs and product design, monitor quality, initiate ways to respond quickly to market demand, and find new markets.[11]

In private enterprise, the effectiveness of management is generally assessed by its ability to produce profit. In public enterprise (government), management effectiveness is assessed more in terms of its ability to get maximum goods or services at a given level of cost. Both are legitimate and effective management productivity measures.[12]

Productivity Tables

The key question about productivity is whether or not — in aggregate — it's increasing or decreasing and by how much. This is the major determinant of whether our living standards will rise or fall.[13] It is also the question BLS attempts to answer with its productivity statistics.

Table 1, extracted from BLS's June 1990 *Monthly Labor Review*, shows U.S. productivity growth in the last three decades and in 1989. It provides index numbers of productivity for four components of the U.S. economy: business, nonfarm business, nonfinancial corporations, and manufacturing.

In this table, BLS measures productivity by "output per hour of all persons." (It cannot be stressed enough that this productivity gauge includes the effects from all inputs, including capital, management, technology, as well as labor, although the unit of expression is "all persons.") Data in this table are the most traditional of the productivity statistics produced by BLS and include the output of government enterprises.[14]

Table 1 shows that from 1960 to 1989, business productivity increased 72.7 percent, or an average of 2.51 percent per year. But the distribution of those rates of increase — as shown in the bottom half of Table 1 — shows decreasing rates of growth in the 1970s with a modest recovery in most sectors in the 1980s.

Manufacturing was an exception, having better productivity growth in the 1980s than in the 1960s. In 1989, however,

(Continued on page 4)

Table 2. **Annual Indexes of U.S. Multifactor Productivity in Selected Years, and Annual Average Percentage Change of Multifactor Productivity by Decade and 1987**

	Output Per Hour of All Persons (1977 = 100)					Percentage Change			
	1960	1970	1980	1986	1987	1960s	1970S	1980s	1987
Private Business									
Productivity:									
Output of persons	67.3	88.4	99.2	110.3	112.2–	3.14	1.22	1.87	1.72
Ouput of capital services	103.7	102.7	94.1	93.0	93.7	-0.10	-0.84	-0.06	0.75
Multifactor Productivity	78.5	93.1	97.4	103.9	104.7	1.86	0.46	1.07	0.77
Output	55.3	80.2	106.6	128.7	133.4	4.50	3.29	3.59	3.65
Private Nonfarm Business:									
Productivity:									
Output of persons	70.7	89.2	98.7	108.3	109.1	2.62	1.07	1.51	0.74
Ouput of capital services	104.9	103.5	93.3	90.8	91.5	-0.13	-0.99	-0.28	0.77
Multifactor Productivity	81.2	93.8	96.9	102.0	102.7	1.55	0.33	0.86	0.67
Output	54.4	79.9	106.6	128.3	133.2	4.69	3.34	3.56	3.82
Manufacturing									
Productivity:									
Output of persons	62.2	80.8	101.4	127.7	131.9	2.99	2.55	4.30	3.29
Ouput of capital services	103.0	99.1	91.0	98.4	102.0	-0.38	-0.82	1.73	3.66
Multifactor Productivity	72.0	85.3	98.6	119.5	123.6	1.85	1.56	3.62	3.43
Output	52.5	78.6	103.2	124.7	130.1	4.97	3.13	3.72	4.33

Source: U.S. Department of Labor, Bureau of Labor Statistics

(Continued from page 3)
the annual growth rate dropped off again, quite substantially.

Nonfinancial corporations also recorded a poor performance in 1989 with a rate of increase of practically zero. This does not bode well for increasing Americans' income, but be aware that productivity statistics are affected in the short term by business cycles, and 1989 was a period of slow growth.

Multifactor Productivity

BLS developed "multifactor" productivity tables some years after the original series in an attempt to shed some light on the relative effects of labor and capital inputs on productivity.

Multifactor productivity data are only available for three major sectors: private business, private nonfarm business, and manufacturing. The output of government enterprises is not available for the this series because of inadequate information on capital used.[15]

Table 2 shows the rates of change of multifactor productivity in the 1960s, '70s, and '80s, and in 1987, the latest year available. The patterns are not much different than in Table 1, although the magnitudes are about 0.5 to 1.0 percentage points lower.

But what can be discerned from the relative outputs per unit of capital input, or per unit of labor input? Table 2 shows that, generally speaking, the "output per hour of all persons" has been increasing (though at decreased rates from the 1960s), while "output per unit of capital services" has been decreasing through all three decades.

Nevertheless, in 1987, growth in output per unit of capital services became positive. Again, the manufacturing sector deviated from the pattern of the private business sector, with growth throughout the 1980s, as well as specifically in 1987.

Table 3 shows that growth of "capital services inputs" has been declining throughout all three decades and 1987, while "inputs of hours of all persons" grew more rapidly in the 1970s, dropped off in the 1980s, but picked up again in 1987.

(Continued on page 5)

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Manufacturing's pattern also differed from private business on the capital services inputs side. Growth of inputs of capital services declined more radically in manufacturing throughout all three decades and in 1987 than in the private business sectors. And manufacturing's growth of inputs of hours of all persons declined in the 1970s and stayed flat in the 1980s, until it picked up substantially in 1987, while private business saw a steady rise over that period of time.

Manufacturing's strong decline in capital services inputs in the 1980s can be partially attributed to corporate raiding and leveraged buyouts. Although leveraged buyouts and resulting high interest payments may not be the only reason for declining use of capital services, it makes economic sense to decrease the use of capital when already saddled with a high amount of debt.

Conclusions and Concerns

Taking a hard look at productivity statistics can only convince one that interpreting them is difficult.

It's nearly certain that rates of productivity growth have been declining over the last three decades — except in manufacturing — with some small improvement in the 1980s. That does not mean that productivity itself is falling. Rather, it's just not growing as fast.

Even with multifactor productivity statistics, it's difficult to determine where the problem lies — labor, capital, management, or other factors. A realization of this quandary led BLS to add the input factors of energy, non-energy materials, and services to manufacturing productivity statistics in 1983.[16] Certainly, the energy crisis of the '70s had underscored the importance of including energy inputs in the productivity equation.

Researchers Sar Levitan and Frank Gallo have identified other problems with U.S. productivity statistics. One is that because BLS uses the market value of goods and services as a proxy for output, on paper, investment in resources to

(Continued on page 6)

Table 3. Annual Indexes of U.S. Labor and Capital Inputs to Productivity in Selected Years, and Annual Average Percentage Change of Inputs to Productivity by Decade and 1989

	Output Per Hour of All Persons (1977 = 100)					Percentage Change			
	1960	1970	1980	1986	1987	1960s	1970s	1980s	1987
Private Business									
Inputs:									
Hours of All Persons	82.2	90.8	107.5	116.7	120.0	1.05	1.84	1.66	2.83
Capital Services	53.3	78.1	113.3	138.5	142.4	4.65	4.51	3.67	2.82
Combined Inputs	70.5	86.1	109.4	123.9	127.4	2.21	2.71	2.35	2.82
Capital/Hr/Person	64.9	86.1	105.4	118.7	118.6	3.27	2.24	1.79	-0.08
Private Nonfarm Business									
Inputs:									
Hours of All Persons	77.0	89.6	108.0	118.5	122.0	1.64	2.05	1.85	2.95
Capital Services	51.9	77.2	114.2	141.3	145.5	4.87	4.79	3.92	2.97
Combined Inputs	67.1	85.2	110.0	125.8	129.6	2.70	2.91	2.55	3.02
Capital/Hr/Person	67.4	86.2	105.7	119.3	119.2	2.79	2.26	1.82	-0.08
Manufacturing:									
Inputs:									
Hours of All Persons	84.4	97.3	101.7	97.7	98.6	1.53	0.45	-0.44	0.92
Capital Services	51.0	79.3	113.4	126.8	127.6	5.55	4.30	1.79	0.63
Combined Inputs	72.9	92.1	104.6	104.4	105.3	2.63	1.36	0.10	0.86
Capital/Hr/Person	60.4	81.5	111.5	129.8	129.4	3.49	3.68	2.29	-0.31

Source: U.S. Department of Labor, Bureau of Labor Statistics

(Continued from page 5)
control pollution reduces productivity, because clean air and water are assigned no market values.

Another problem Levitan and Gallo have identified is that measuring output is troublesome in industries with no clearly quantifiable product. The output of the teaching profession is one example.

The two researchers also point out that a change in quality is not clearly captured by substituting dollar value for physical volume to estimate "real" output when technological change is a factor. Levitan and Gallo conclude that "the continued growth of the service sector casts doubts about how accurately current productivity statistics measure overall economic efficiency."[17]

With these and other problems in mind, it's amazing that anyone can express with certainty that the problem of declining U.S. productivity growth is the result of poor worker attitudes, inferior education, or any other labor trait.

As we go into the 1990s, improvement of American education is being touted as the answer to our competitiveness problem. We seem to have forgotten that our greatest productivity gains came in the decade after World War II when the parents of the Baby Boom generation went to work in force. Most of those parents had far less education than the present generation.

Taking for granted that labor is the sole reason of declining productivity growth prevents us from looking deeper into the problem. Other areas worthy of examination include: corporate raiders, managers, fossil-energy dependence, and accounting methods related to environmental cleanup.

—Ron Simon
RA Economic Analysis Manager

Footnotes:

1. BLS Handbook of Methods, Bulletin 2285, U.S. Department of Labor, Bureau of Labor Statistics, (Washington, D.C.: U.S. Government Printing Office, April 1988), p. 69.

2. Productivity Costs, First Quarter 1990, U.S. Department of Labor, Bureau of Labor Statistics News Release, Technical Notes, (Washington, D.C., June 4, 1990).

3. Note that a basic economic text states, "The 'marginal productivity' of labor (or any other factor) cannot be determined independently of the contribution of other factors." James D. Gwartney and Richard L. Stroup, "Economics: Private and Public Choice," 4th ed., (Orlando: Harcourt Brace Jovanovich, 1987), p 537.

4. ibid., p.203.

5. According to John Kitching, perhaps this effect is mitigated somewhat by the practice of managers who purchase their firms through leveraged buyouts (LBOs): "Although interest charges rise enormously after a buyout, owners move quickly to pay down debt and reduce the burden. Debt repayment in year one of the average LBO exceeds 400 percent of the amount of repayment forecast in the buyout plan. In year two of the average buyout, management pays down more than 600 percent as much debt as forecast. Over time, however, as the interest burden stabilizes, debt repayment trails off." John Kitching, "Early Returns on LBOs," Harvard Business Review, (November-December 1989), p.74.

6. As Robert Mercer, former Goodyear chairman, was quoted as saying as he discussed the effects of fighting off a raid, "We're spending $1 million a day in unnecessary interest expense that's going to 17 banks around the world. I fail to see what the interest payments add to the GNP of this country or the total development of this country." Ruth Simon and Graham Button, "What I Learned In The Eighties," Forbes, (January 8, 1990) p.102.

7. Gwartney and Stroup, Economics, p. 148.

8. ibid., p. 203.

9. Stephen C. Rosenbaum, Managing and Measuring Productivity, (New York: Training by Design, Inc., 1981) p.24.

10. A survey of Harvard Business Review readers has laid most of the blame for America's slowing productivity and deteriorating competitiveness on managers, especially for their short-term outlook and complacency. Tom Ehrenfeld, ed., "The Gray Area," Harvard Business Review, (November-December 1989) p. 222.

11. ibid.

12. Rosenbaum, "Managing and Measuring Productivity," pp. 41-49.

13. William Gullickson and Michael J. Harper, "Multifactor productivity in U.S. manufacturing, 1949-83," *Monthly Labor Review*, (October 1987) p 19.

14. BLS Handbook of Methods, p.71.

15. ibid.

16. ibid.

17. U.S. Congress, Joint Economic Committee, Workforce Statistics: Do We Know What We Think We Know — And What Should We Know?, by Sar A. Levitan and Frank Gallo, Joint Committee Print, (Washington D.C.: U.S. Government Printing Office, December 26, 1989), pp. 21-22.

Productivity Growth in U.S. Lagged Foreign Counterparts' Rise in '89, BLS Report Shows

A 2 percent growth rate in U.S. manufacturing labor productivity (output per hour) from 1988 to 1989 was matched or exceeded by eight of 10 foreign countries for which data are available, the Labor Department's Bureau of Labor Statistics (BLS) recently reported.[1] The BLS data were part of an annual study of how labor productivity and labor costs compare in the U.S. and other economies.

Meanwhile, a U.S. increase of 2.2 percent in manufacturing unit labor costs was smaller than increases in six of the 12 foreign economies studied, but larger than such costs in five other economies, including Japan, France, and Germany. Adjusted for changes in foreign currency values relative to the U.S. dollar, seven countries had substantial declines in unit labor costs, and for the second straight year, Korea's unit labor cost growth rate far exceeded the rates in all the other economies studied.

Table 1 summariezes BLS' comparative annual measures of percent changes from 1988 to 1989 in manufacturing productivity, unit labor costs, and related variables for the United States, Canada, Japan, and eight European countries. This table also shows percent changes in unit labor costs for Korea and Taiwan, but comparable productivity figures are not available because adequate labor input measures have not been developed.

Norway and Japan were the leaders in manufacturing productivity with growth rates in the range of about 6 to 6½ percent. However, Norway's large increase was due almost entirely to a substantial decrease in labor hours. The United Kingdom, France, Germany, and the Netherlands experienced increases of 4 to 5 percent; and Denmark and Italy posted gains of 3 percent. Canada matched the U.S. increase, and only Sweden had a smaller increase.

Manufacturing output rose in all 13 economies studied in 1989, although Norway's gain was very slight. The U.S. increase of about 3 percent was substantially lower than

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Table 1. Manufacturing Productivity[1] and Labor Costs by Country, Percentage Change, 1988-1989

	Output Per Hour	Output	Hours	Employment	Unit Labor Costs: Hourly Comp.	Unit Labor Costs: National Currency	Unit Labor Costs: U.S. Dollars
United States	2.0	2.9	.9	1.1	4.2	2.2	2.2
Canada	2.2	1.9	-.2	.9	8.5	6.2	10.4
Japan	5.8	7.4	1.5	2.5	6.8	.9	-6.3
Korea	—	3.7	—	—	—	13.6	23.8
Taiwan	—	4.5	—	—	—	4.3	13.1
Denmark	3.0	1.5	-1.5	-.8	5.2	2.1	-6.0
France	4.7	4.1	-.5	.0	4.6	-.1	-6.6
Germany	4.5	4.8	.3	1.3	4.5	.0	-6.6
Italy	2.9	3.0	.2	.4	10.7	7.7	2.2
Netherlands	4.5	5.1	.6	1.0	1.5	-2.8	-9.4
Norway	6.4	.3	-5.7	-6.2	4.2	-2.0	-7.5
Sweden	1.6	2.3	.6	1.6	10.9	9.1	3.7
United Kingdom	5.1	4.5	-.6	.3	10.1	4.8	-3.6

1. Although the productivity measure relates output to the hours of persons employed in manufacturing, it does not measure the specific contributions of labor as a single factor of production. Rather, it reflects the joint effects of many influences, including new technology, capital investment, capacity utilization, energy use, and managerial skills, as well as the skills and efforts of the work force.

Source: U.S. Department of Labor, Bureau of Labor Statistics, July 1990

War Participation Made Little Difference in Vietnam Vets' Job Status

Following are brief summaries of recently issued reports by the U.S. Department of Labor's Bureau of Labor Statistics (BLS). Additional information can be obtained by contacting the Labor Department in Washington D.C.

A survey taken in September 1989 showed that the labor market situation of veterans who served in the Vietnam theater of operations was little different from other Vietnam-era veterans and that about half of all Vietnam-era veterans have participated in special veterans' programs. Veterans with disabilities did have greater labor market problems, especially those with severe disabilities.

Of the 7.9 million male veterans of the Vietnam era (the period from August 1964 to May 1975), close to half, or 3.7 million, served in the Southeast Asia war theater of operations. The labor force participation rate for this group was 90 percent in September 1989, slightly lower than the rates for Vietnam-era veterans who served elsewhere during the period. The unemployment rates for Vietnam-era veterans were relatively low, with the rate for war-theater veterans (3.7 percent) little different than that of non-theater veterans (3.3 percent). Most Vietnam-era veterans are now in the 35-54 year age group; comparing them with their contemporaries who did not serve shows few labor market differences.

BLS REPORTS

White-Collar Pay Varies Widely

BLS' nationwide white-collar pay survey of the private goods-producing industries, conducted in March 1990, showed average salaries from $11,522 to $119,670 a year, reflecting the wide range of duties and responsibilities in the mining, construction, and manufacturing industries.

Average salaries among the 32 occupations surveyed varied widely by skill and experience. Beginning accountants and engineers, for example, averaged $24,723 and $31,412 a year, respectively, while the top level accountants (VI) averaged $73,097 — $2,451 above the comparable level of engineers (VI). Salaries for the highest level of engineer surveyed (level VIII) averaged $93,514. Other jobs also had wide pay differences among the levels studied, with average salaries ranging from $11,522 to $22,312 for four levels of general clerks and from $19,850 to $32,830 for five levels of secretaries.

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last year's growth rate. Canada, Denmark, and Sweden, in addition to Norway, recorded gains below that of the United States. Japan outpaced all other economies with an increase of 7 .4 percent.

The strong employment growth the U.S. and Canada experienced in 1988 did not carry over into 1989. Both had 1989 growth rates of about 1 percent. Japan, on the other hand, showed somewhat stronger growth than in 1988 with an increase of 2 percent. The level of employment in France in 1989 was unchanged, thus marking the first time in 15 years that manufacturing employment did not decline. Similarly, the United Kingdom recorded a slight increase in employment in 1989, the second consecutive year of growth following 10 years of declines.

Japan had the largest increase in total labor hours in manufacturing, followed by the United States, Sweden, and the Netherlands. Norway, for the second consecutive year, posted the largest decline in employee hours, stemming from its employment decrease.

Hourly compensation in manufacturing — which includes wages and salaries, supplements, and employer payments for social security and other employer-financed benefit plans — rose 4.2 percent in the United States from 1988 to 1989. This gain was the largest since 1986 and represents the second consecutive year in which the United States has experienced increasing rates of hourly compensation growth. However, of the 10 foreign economies for which data are available, the U.S. increase was among the lowest.

While manufacturing unit labor costs, which reflect changes in both labor productivity and hourly compensation, were still moderate in the United States, the 2.2 percent rise represents an increase over the trend of smaller gains or declines the U.S. has experienced since 1982. In addition, it 's the second consecutive year in which slower productivity growth and rising hourly compensation growth have combined to produce successively larger unit labor cost increases.

1. The U.S. output measures used for the years prior to 1988 are Gross Product Originating (GPO) in 1982 prices from the National Income and Product Accounts prepared by the Commerce Department's Bureau of Economic Analysis (BEA). The measures for 1988 and 1989 are based on the trend shown by the index of industrial production prepared by the Board of Governors of the Federal Reserve System, because GPO numbers are not yet available.

—U.S. Department of Labor, Bureau of Labor Statistics

The Arizona Labor Force in July

Arizona's total employment fell by 24,500 in July, while total unemployment increased by only 2,600. This combination resulted in a seasonally adjusted increase in the state unemployment rate of one-tenth of one percent, to 5.4 percent.

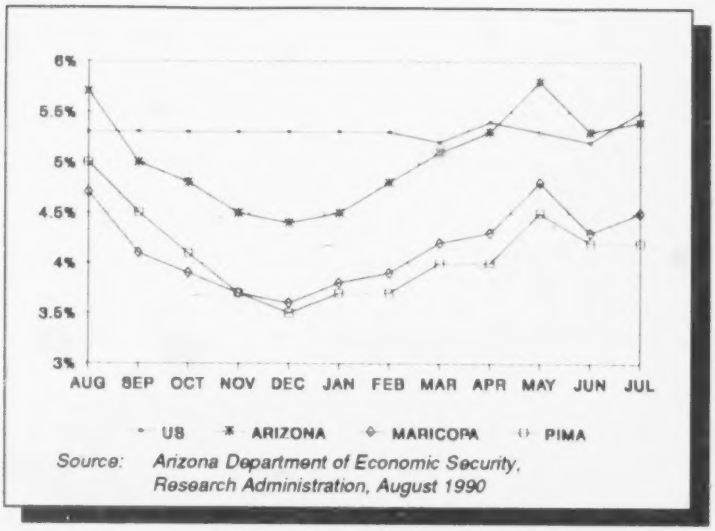
Job losses in July did not translate into even higher levels of unemployment as the total civilian labor force declined by 21,900. The decrease was split almost equally between agricultural and non-agricultural employment, both of which normally experience declines during July.

Statewide, the lowest unemployment rates occurred in Pima and Maricopa counties, coming in at 4.2 and 4.5 percent, respectively. Santa Cruz County had the highest unemployment rate at 19.1 percent, followed by Yuma County with a unemployment rate of 17.6 percent. Yavapai County had the lowest non-metropolitan unemployment rate at 4.9 percent.

While almost all industries had employment declines in July, the good news is, on a seasonally adjusted basis, total wage and salary employment was up over normal July levels. Employment declines that normally occur in July were, on average, smaller than the state has experienced in prior years.

The only major industries to experience employment growth in July were construction; and transportation, communications, and public utilities (TCPU). Construction employment increased 300, or 100 more than the average July increase since 1982. An increase of 100 in TCPU employment was 200 less than the average increase of 300 jobs for the month.

Finance, insurance, and real estate (FIRE), which has been experiencing slow employment growth since February, remained unchanged from June. The lack of movement in FIRE statewide was also found on the substate level, where both the metropolitan and non-metropolitan counties maintained the same employment levels.



Source: Arizona Department of Economic Security, Research Administration, August 1990

Figure 1. U.S., Arizona, and Maricopa and Pima Counties' Unemployment Rates, August 1989–July 1990

Manufacturing showed the smallest employment decrease in July, losing 200. Manufacturing typically gains 500 jobs during this mid-summer month, of which durable goods accounts for an 800 gain and non-durable goods for a 300 loss. Durable goods employment was unchanged, while non-durable goods experienced a near normal drop of 200.

Mining employment was down by 500 statewide in July, when an average decrease of 200 is normal. Mining employment showed a larger-than-normal decrease in July due to a strike at ASARCO Inc. in Pinal County.

Wholesale and retail trade usually experience employment declines in July and this year was no exception. Wholesale trade showed a drop of 600 in a month the industry usually has a decrease of 800. Retail trade dropped 3,300, or 300 less than the average July decline. General merchandise and apparel, food stores, and eating and drinking places all showed some employment declines, with automotive and service stations gaining 100. Eating and drinking places experienced the largest loss — 2,000 jobs.

Services employment decreased 1,800, or 200 more than the average decline for July. Hotels and other lodging places,

(Continued on page 14)

	ARIZONA				
	July* 1990	June 1990	July 1989	Amount Change June - July	Change 1989 - 1990
TOTAL CIVILIAN LABOR FORCE**	1730.4	1752.3	1702.3	-21.9	+28.1
Total Unemployment	104.3	101.7	99.7	+2.6	+4.6
Rate	6.0	5.8	5.9	—	—
Rate (Sea. Adj.)***	5.4	5.3	5.3	—	—
Total Employment	1626.1	1650.6	1602.6	-24.5	+23.5

Note: Above Labor Force Statistics Should Not Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SAL

TOTAL WAGE AND SALARY	1470.3	1480.5	1413.3	-10.2	+57.0
Manufacturing	189.2	189.4	187.3	-0.2	+1.9
Durable Goods	143.7	143.7	142.6	0.0	+1.1
Stone, Clay, and Glass	7.3	7.4	7.5	-0.1	-0.2
Primary and Fabricated Metals	15.4	15.6	15.4	-0.2	0.0
Primary Metals	7.6	7.7	7.6	-0.1	0.0
Fabricated Metals	7.8	7.9	7.8	-0.1	0.0
Machinery	59.0	59.0	60.6	0.0	-1.6
Aircraft and Missiles	27.7	27.6	26.2	+0.1	+1.5
Lumber and Wood Products (Excluding Furniture)	8.2	8.0	7.6	+0.2	+0.6
Nondurable Goods	45.5	45.7	44.7	-0.2	+0.8
Food and Kindred Products	10.2	10.1	9.7	+0.1	+0.5
Printing and Publishing	17.0	16.8	16.5	+0.2	+0.5
Mining and Quarrying	12.3	12.8	12.2	-0.5	+0.1
Copper Mining	9.4	9.9	9.3	-0.5	+0.1
Construction	84.3	84.0	86.9	+0.3	-2.6
Trans., Communications, & Public Utilities	80.6	80.5	77.3	+0.1	+3.3
Transportation	45.1	45.2	41.1	-0.1	+4.0
Communications and Public Utilities	35.5	35.3	36.2	+0.2	-0.7
Trade	372.6	376.5	359.6	-3.9	+13.0
Wholesale Trade	77.8	78.4	72.9	-0.6	+4.9
Retail Trade	294.8	298.1	286.7	-3.3	+8.1
General Merchandise and Apparel	45.0	45.3	43.4	-0.3	+1.6
Food Stores	48.0	48.1	48.8	-0.1	-0.8
Automotive and Service Stations	36.4	36.3	35.7	+0.1	+0.7
Eating and Drinking Places	104.5	106.5	100.8	-2.0	+3.7
Finance, Insurance, and Real Estate	94.6	94.6	92.7	0.0	+1.9
Services and Miscellaneous	408.2	410.0	383.8	-1.8	+24.4
Hotels and Lodging Places	44.9	46.0	40.9	-1.1	+4.0
Business Services	76.0	76.1	72.5	-0.1	+3.5
Health Services	101.4	101.3	96.2	+0.1	+5.2
Government	228.5	232.7	213.5	-4.2	+15.0
Federal	47.9	47.9	43.1	0.0	+4.8

* Preliminary.

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

**** Business Services underwent a series break between December 1987 and January 1988 as a result of the 1987 SIC realignment.

ce and Employment
n Thousands)

MARICOPA COUNTY					PIMA COUNTY				
			Amount	Change				Amount	Change
July* 1990	June 1990	July 1989	June - July	1989 - 1990	July* 1990	June 1990	July 1989	June - July	1989 - 1990
1079.5	1093.3	1064.4	-13.8	+15.1	312.2	316.5	312.1	-4.3	+0.1
50.4	50.6	48.9	-0.2	+1.5	13.6	14.2	14.9	-0.6	-1.3
4.7	4.6	4.6	—	—	4.4	4.5	4.8	—	—
4.5	4.3	4.4	—	—	4.2	4.2	4.6	—	—
1029.1	1042.7	1015.5	-13.6	+13.6	298.6	302.3	297.2	-3.7	+1.4
ARY EMPLOYMENT BY PLACE OF WORK									
977.0	983.8	939.1	-6.8	+37.9	246.5	248.7	239.1	-2.2	+7.4
140.2	140.3	139.0	-0.1	+1.2	27.2	27.2	27.5	0.0	-0.3
107.9	107.8	107.0	+0.1	+0.9	21.6	21.6	22.0	0.0	-0.4
4.4	4.4	4.5	0.0	-0.1					
10.4	10.6	10.5	-0.2	-0.1					
48.5	48.6	50.0	-0.1	-1.5					
32.3	32.5	32.0	-0.2	+0.3	5.6	5.6	5.5	0.0	+0.1
6.9	6.8	6.4	+0.1	+0.5					
12.2	12.1	11.9	+0.1	+0.3					
0.9	0.9	0.9	0.0	0.0	2.2	2.3	2.1	-0.1	+0.1
55.9	55.3	58.4	+0.6	-2.5	14.6	14.8	15.1	-0.2	-0.5
56.6	56.7	53.7	-0.1	+2.9	9.8	9.7	10.0	+0.1	-0.2
33.6	33.8	30.5	-0.2	+3.1	5.1	5.0	4.9	+0.1	+0.2
23.0	22.9	23.2	+0.1	-0.2	4.7	4.7	5.1	+0.0	-0.4
251.1	253.7	241.8	-2.6	+9.3	58.5	59.2	57.2	-0.7	+1.3
62.5	62.8	58.6	-0.3	+3.9	7.7	7.8	7.5	-0.1	+0.2
188.6	190.9	183.2	-2.3	+5.4	50.8	51.4	49.7	-0.6	+1.1
28.2	28.4	27.2	-0.2	+1.0	6.8	6.8	6.8	0.0	0.0
30.7	30.8	31.1	-0.1	-0.4	7.8	7.7	8.2	+0.1	-0.4
23.2	23.1	22.7	+0.1	+0.5	5.8	5.8	5.7	0.0	+0.1
65.9	67.4	63.4	-1.5	+2.5	19.3	19.8	18.9	-0.5	+0.4
75.9	75.9	74.3	0.0	+1.6	11.6	11.6	11.4	0.0	+0.2
274.5	276.7	257.6	-2.2	+16.9	74.5	74.5	70.5	0.0	+4.0
27.2	28.1	24.0	-0.9	+3.2	6.6	6.7	5.9	-0.1	+0.7
61.1	61.2	58.8	-0.1	+2.3	10.3	10.2	9.7	+0.1	+0.6
65.7	65.8	62.7	-0.1	+3.0	21.9	21.8	20.7	+0.1	+1.2
121.9	124.3	113.4	-2.4	+8.5	48.1	49.4	45.3	-1.3	+2.8

NOTE: Prepared by Arizona Dept. of Economic Security, Research Administration, in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics.

Non-metropolitan Counties
Labor Force and Employment
July 1990

	Apache	Cochise	Coco-nino	Gila	Graham	Green-lee	La Paz
CIVILIAN LABOR FORCE*	13,325	36,850	46,450	13,175	8,350	2,850	6,100
Total Unemployment	2,850	2,500	3,650	1,200	575	200	450
Rate	21.4%	6.8%	7.9%	9.1%	6.9%	7.0%	7.4%
Rate (Seas. Adj.)**	14.3%	6.8%	6.7%	9.4%	6.6%	6.8%	7.7%
Total Employment	10,475	34,350	42,800	11,975	7,775	2,650	5,650
THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS							
TOTAL WAGE AND SALARY	13,750	25,925	42,400	11,325	4,875	2,800	3,775
Manufacturing	800	1,275	3,550	1,375	225	25	250
Mining & Quarrying	50	175	300	1,350	0	1,725	75
Construction	450	725	1,900	425	175	75	200
T.C.P.U.	2,000	1,875	2,775	450	150	50	125
Trade	1,975	5,800	10,325	2,725	1,325	250	1,250
F.I.R.E.	450	675	725	300	125	25	100
Services & Misc.	4,550	5,250	12,100	2,300	875	150	1,075
Government	3,475	10,150	10,725	2,400	2,000	500	700

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	37,975	27,800	38,950	12,300	41,050	53,525
Total Unemployment	2,125	3,825	3,125	2,375	1,975	15,400
Rate	5.6%	13.8%	8.0%	19.3%	4.8%	28.8%
Rate (Seas. Adj.)**	5.6%	10.5%	7.4%	19.1%	4.9%	17.6%
Total Employment	35,850	23,975	35,825	9,925	39,075	38,125
THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS						
TOTAL WAGE AND SALARY	26,525	21,775	27,600	10,300	27,900	27,800
Manufacturing	2,550	2,225	3,825	775	2,275	2,650
Mining & Quarrying	50	1,225	3,250	0	900	75
Construction	3,250	1,375	550	400	2,700	1,550
T.C.P.U.	1,200	1,675	1,100	725	1,100	900
Trade	8,425	4,575	5,875	4,500	7,825	8,125
F.I.R.E.	1,250	450	850	300	975	925
Services & Misc.	6,300	6,150	4,750	1,900	7,200	6,700
Government	3,500	4,100	7,400	1,700	4,925	6,875

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities

F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Estimated Hours and Earnings of Production Workers in Selected Industries Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	July* 1990	June 1990	July 1989	July* 1990	June 1990	July 1989	July* 1990	June 1990	July 1989
Manufacturing	419.21	413.51	409.44	40.7	40.7	40.7	10.30	10.16	10.06
Aircraft & Missiles	662.16	659.86	625.03	46.5	46.6	44.9	14.24	14.16	13.72
Food & Kindred Prod.	342.34	339.50	355.92	39.9	38.8	40.4	8.58	8.75	8.81
Primary Metals	519.84	494.09	516.00	38.0	36.9	37.5	13.68	13.39	13.76
Machinery	362.30	358.13	387.65	37.7	37.5	39.8	9.61	9.55	9.74
Copper Mining	600.28	608.37	564.89	43.0	44.7	45.3	13.96	13.61	12.47
Construction	463.81	462.85	434.38	38.3	38.7	37.0	12.11	11.96	11.74
Utilities	737.52	733.67	703.63	43.9	44.9	42.8	16.80	16.34	16.44
Retail Trade**	264.60	261.74	256.96	33.2	33.3	33.9	7.97	7.86	7.58
Wholesale Trade	391.25	389.27	387.48	39.6	39.4	39.1	9.88	9.88	9.91

Estimated Hours and Earnings of Production Workers in Selected Industries Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	July* 1990	June 1990	July 1989	July* 1990	June 1990	July 1989	July* 1990	June 1990	July 1989
Manufacturing	451.12	439.32	431.90	42.2	41.8	40.9	10.69	10.51	10.56
Construction	470.06	469.94	450.38	38.0	38.3	37.5	12.37	12.27	12.01
Retail Trade**	273.90	273.17	270.75	33.2	33.6	34.1	8.25	8.13	7.94
Wholesale Trade	399.51	396.90	404.88	38.6	38.2	39.5	10.35	10.39	10.25

Estimated Hours and Earnings of Production Workers in Selected Industries Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	July* 1990	June 1990	July 1989	July* 1990	June 1990	July 1989	July* 1990	June 1990	July 1989
Manufacturing	357.27	344.93	365.57	37.1	36.5	38.4	9.63	9.45	9.52
Construction	387.19	396.81	389.92	36.7	37.4	37.1	10.55	10.61	10.51
Utilities	641.21	626.50	584.66	41.8	41.6	40.1	15.34	15.06	14.58

* Preliminary.

** Excludes eating and drinking places.

Note: These estimates are based on a sample of full- and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs July 1990

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,730,425	1,626,137	104,288	6.0%
Apache	13,321	10,472	2,849	21.4
Cochise	36,849	34,356	2,493	6.8
Coconino	46,435	42,796	3,639	7.8
Gila	13,193	11,987	1,206	9.1
Graham	8,373	7,786	587	7.0
Greenlee	2,860	2,654	206	7.2
La Paz	6,107	5,649	458	7.5
Maricopa	1,079,462	1,029,089	50,373	4.7
Mohave	37,961	35,841	2,120	5.6
Navajo	27,805	23,977	3,828	13.8
Pima	312,241	298,599	13,642	4.4
Pinal	38,962	35,825	3,137	8.1
Santa Cruz	12,297	9,923	2,374	19.3
Yavapai	41,045	39,068	1,977	4.8
Yuma	53,513	38,115	15,398	28.8

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

The Arizona Labor Force in July

(Continued from page 9)

which had the largest employment decline of any services' subindustry (1,100 jobs), still has an over-the-year increase of 9.8 percent. Health services continued its streak of positive monthly performances in 1990 by gaining 100 jobs in July.

Government had the largest employment decline of the major industry groups in July, losing 4,200 jobs. The greatest part of the loss occurred in schools, where employment was down for the second-consecutive month. Government, on average, declines by 9,000 in July.

In summary, with the uncertainty in the Middle East, and the U.S. Chamber of Commerce predicting a national recession to begin as early as the fourth quarter of 1990, the next several months should be interesting, indeed. Arizona cannot remain isolated from shocks to the national economy, and a watchful eye should be kept on how the U.S. economy is faring.

—Dennis Doby
RA Economist

Economic-Growth Legislation Gives Boost to Nebraska Employment

Following are brief summaries of news stories compiled from a variety of sources relating to labor issues affecting the nation and Arizona.

An innovative economic-development program, along with a strong work ethic and low cost of living have combined to give Nebraska the lowest unemployment rate in the country (2.0 percent in June), according to an article in *Employment & Training Reporter*. Nebraska's economic picture turned around suddenly after two tax-incentive bills were enacted in 1987, giving large and small businesses a series of write-offs and tax rebates in order to spur economic development and job growth, the weekly Washington D.C.-based publication said in its Aug. 15 issue. In the early and mid-1980s, the state's agricultural, manufacturing and railroad industries fell on hard times, leading to a massive number of bankruptcies and jobs losses.

In order to qualify for incentives, large businesses must invest $10 million in capital equipment and create 100 new full-time jobs, while small companies are required to spend a minimum of $75,000 on capital investment and create two new full-time jobs. Among the incentives offered to businesses are: tax credits for employee benefit expenses, rebates of 10 percent on state taxes, refunds on sales taxes imposed on capital equipment purchases, and exemptions from capital gains taxes for workers who own stock in Nebraska-based companies.

Aiding the economic-development legislation are Nebraska's low cost of living, extensive railroad network, and productive work force, says Stu Miller, the director of the state's Economic Development Department. In three industries where Nebraska has seen extensive growth — manufacturing, food processing, and telemarketing — average hourly wages are relatively low, with respective numbers of $9.70, $8.93, and $6.50 an hour. Nebraska, which is a right-to-work state, also has seen a boom in its agricultural and insurance sectors.

One fallout from the incentive legislation has been that a large percentage of the estimated 25,000 newly created jobs are low-wage, low-skill positions. But because of the large numbers of out-of-work farmworkers, the state's Job Service offices have not had a hard time filling job orders. On the other hand, because of a labor shortage the unemployed are not enrolling in training and educational programs that tend to lead to higher paying jobs, which is just the opposite of times when unemployment was higher.

Goodwill: Disabled Law Shouldn't Burden Firms

The recently signed Americans with Disablities Act (ADA) should not impose a high cost to businesses when the law begins phasing in two years from now, according to a survey by Goodwill Industries of America. The legislation requires that companies consider employment for disabled who can complete the "essential functions" of the job when reasonable accommodations are provided. Responding to the Goodwill survey, businesses said that about 50 percent of the accommodations can be made at no cost, 30 percent at a cost under $500, and 8 percent at a cost of more than $2,000.

ADA will allow companies to take a tax deduction up to $35,000 a year for architectural costs to make a workplace accessible for disabled individuals, and businesses may also be able to apply for deductions under the Targeted Jobs Tax Credit program. Businesses with fewer than 15 employees are exempt from the law.

Goodwill has published a brochure on ADA and is making a kit available at its local offices that outlines the major aspects of the legislation. In addition, Goodwill will put on seminars in Washington D.C. in October and February for companies seeking more information on the law.

NEWS IN BRIEF

World Group Takes Stand on Night Work

The 77th session of the International Labour Conference, held in early summer in Geneva, Switzerland, adopted stands on night work and the use of hazardous chemicals, gave a blueprint for promoting self-employment, and issued a resolution on the need for balance between economic development and protecting the environment. The conference was attended by more than 2,000 representatives of government, employers, and employees from 139 counties.

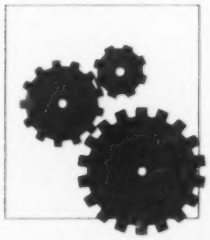
The stand on night work calls on employers to provide health and maternity protections, opportunities for occupational advancement, assistance with family and social responsibilities, and fair compensation "recognizing the nature of night work." An international convention was passed suggesting ways to prevent or reduce the incidence of chemically induced illnesses. The convention "sets out responsibilities of suppliers and those of employers as regards (to) identification (and) transfer of chemicals," as well as the areas of exposure, operational control, disposal, information, training, and cooperation with workers and their representatives.

The conference also passed a resolution promoting self-employment and its contribution to economic growth, but stressed the need "for adequate social protection and respect for relevant international labor standards."

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of business news is not possible. In addition, the Arizona LMI Newsletter is not responsible for incorrect information reported by these sources.

MANUFACTURING — Pima County's manufacturing industry received another severe blow when **National Semiconductor Corp.** announced in August the fazing out of its **Tucson plant** over the next 18 months. The closing of the Santa Clara, Calif.-company's facility, which makes military aerospace components, will idle 450 workers, including 50 immediately. National Semiconductor's decision to close — due to restructuring and Defense Department cuts — adds to the manufacturing woes in the Tucson area, which has seen the closing of plants by International Business Machines and Learjet in the recent past, and recent layoffs by Hughes Aircraft Co., Burr-Brown Corp., and AiResearch Tucson Division.



Ansell International caused another setback for Tucson's goods-producing sector when it announced in late August that it's closing a **surgical- and medical-glove plant** because of increased competition, due in part to the use of a cheap labor force in Southeast Asia. The facility's closure, which will be complete by the middle of 1991, will cost about 125 people their jobs.

McDonnell Douglas Helicopter Co. received good and bad news from the Defense Department in August. The good news is the Army awarded McDonnell Douglas a $300 million contract to build **66 more Apache attack helicopters**, although the contract will not affect current and planned layoffs. McDonnell Douglas eliminated 300 full-time and temporary positions at the Mesa helicopter plant in July as part of worldwide staff reductions, and it plans to cut the helicopter work force in Mesa and Culver City, Calif., by another 400 jobs by the end of the year. On the negative side, Defense Secretary Dick Cheney announced that $8 billion will be cut from the $42 billion Light Helicopter program, thereby decreasing the number of helicopters the Army will order from 2,096 to 1,292. McDonnell Douglas and team member Bell Helicopter Textron of Fort Worth have invested $200 million in designing the scout-attack helicopter, and together they expect to employ about 1,200 workers next year if they were awarded the contract.

TRW Inc. will greatly **benefit from a recent decision by General Motors Corp.** to equip all of its U.S.-built cars with air bags by 1995. TRW manufactures air bags at a Mesa plant and is opening a facility later this year or in early 1991 that will make air bag propellant. TRW had previously announced plans to expand its work force at the air bag plant from 870 to 1,270 by late 1991 and to employ 200 people at the propellant facility when it opens.

Sturm Ruger and Company Inc. plans to move its entire **9mm pistol manufacturing facility** from New Hampshire to Prescott as soon as problems with the Arizona Department of Environmental Quality are worked out. Sturm Ruger, which currently employs 55 people in its Prescott foundry (and 200 overall in Prescott), says that total could quadruple in five years when the move is complete. Pay for workers at the new foundry operation will range from $6 to $12 per hour.

An Atlanta-based printer that specializes in food labels plans to construct a **plant in Prescott Valley** that will evenutally employ about 60 workers and add $750,000 to $1 million to the surrounding areas' economies. **Printpak Inc.**, whose clients include Frito Lay, Eagles Snacks, Coca Cola, and Huggies, says it will initially hire about 30 people at $6.50 to $7 an hour when its 100,000-square-foot facility opens in September 1991.

A shortage of timber and a weakness in the construction industry are two of the reasons given for the temporary layoff of 420 workers at the **Stone Forest Industries** lumber mill in the eastern-Arizona town of Eager. Stone Forest has given no timetable for the length of the cutbacks, which will have a major impact on the 6,000 residents of Eager and nearby Springerville.

A U.S. Bankruptcy Court has approved a **reorganization plan** of Scottsdale-based **Kroy Inc.**, a manufacturer of labels and printing products. The plan, which released Kroy from $1.9 billion in claims and allows the infusion of $5 million in working capital, will prevent the company from laying off any of its 300 employees and to expand its operation. In 1988, Kroy had as many as 470 employees.

Arizona is one of three states being considered as a site for an electronics division of Hughes Aircraft Co. Currently located in Torrance, Calif., the **Hughes Industrial Electronics Group's Electron Dynamics Division** employs about 1,200 people and makes microwave devices for the defense industry and other markets. Hughes, which employs about 6,000 workers at its defense plant in Tucson, has not named a specific location in the state. A decision is expected before October.

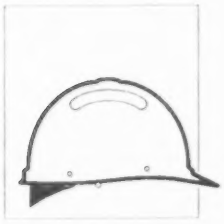
Taiwan-based **Silitek** has purchased the Tucson computer

(Continued on page 17)

(Continued from page 16)

keyboard manufacturing operation of EECO Inc. The new operation, to be called Maxi Switch Inc., will retain its present work force of about 60. In May, Calif.-based EECO laid off about one-third of its 100 employees because of increased competition and plans to build only custom keyboards instead of mass-produced ones.

CONSTRUCTION — **Westcor Partners of Phoenix** has announced plans to remodel and expand **The Colonnade shopping center** in central Phoenix. Westcor, which developed and owns MetroCenter and the Paradise Valley Mall, says it wants to enlarge the shopping center at 20th Street and Camelback Road into to a 1 million-square-foot regional mall and add two 10-story office buildings and a 300-room hotel. Pending approval by the Phoenix City Council, construction on the mall portion of the project would begin in 1992 or '93.



Higher interest rates due to the Middle East crisis have caused the **Home Builders Association of Central Arizona** to revise downward its forecast for **home building permits** in the Valley for 1990. With 30-year loan rates jumping about 1 percent in the past month, the home-building group expects about 12,000 single-family building permits this year instead of its earlier forecast of 13,000. In 1986, at the height of the Arizona building boom, nearly 25,000 permits were issue.

Nearly **$106 million in improvements** for **Tucson International Airport** and **Ryan Airfield** have been approved by the Tucson Airport Authority. About $81 million was allocated for various projects at Tucson International over the next five years, with $17 million going for increasing and widening runways at Ryan Airfield to accommodate larger airplanes.

SunCor Development Co., a division of Pinnacle West Corp., is working on plans for the development of a **35-acre retail complex and a 450-acre residential subdivision in Litchfield Park**, 20 miles west of downtown Phoenix. The 355,000-square-foot retail center, to be called Litchfield Gateway, may include two warehouse-type stores, an auto dealer, and other retail outlets. The residential property, which abuts an 18-hole golf course west of The Wigwam resort, is expected to be called Litchfield Greens II and III and include single- and multi-family dwellings, as well as rental units.

A general business slowdown and $3 million in uncollectable debts is forcing one of Tucson's largest contractors to **lay off nearly all of its 250 employees** by the end of September as it prepares to shut its doors for the forseeable future. **Bruce Greer Construction Co.**, which has done nearly $250 million in business in 20 years of operation, will keep 20 workers on its payroll for about two years to finish an Interstate 10 improvement project. Southern American, a Utah-based bonding company, is guaranteeing the project will be completed and is taking over Greer's company as well as its Tucson office building

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The **city of Glendale** has given the go-ahead to **Westcor Partners of Phoenix** to build a **1.5 million-square-foot mall** on 96 acres in northwest Phoenix near Arrowhead Ranch. Appropriately called the Arrowhead Mall, the development at 75th Avenue and Bell Road will cost in excess of $85 million and be anchored by several major retailers — Dillard's, Robinson's, Sears, J.C. Penney, Broadway, and Mervyn's. Work is expected to begin in October and be completed in spring of 1992.

TRADE — Phoenix-based Circle K Corp. is closing 201 convenience stores across the country, including eight in Arizona, all in the Phoenix area. Circle K, which filed Chapter 11 bankruptcy in May and reported losses of $773 million for fiscal year ending April 30, says 95 percent of employees at closed stores will be transferred to other locations.

The **Metropolitan Appliance, Radio and Television Association (MARTA)** will complete a **move of its headquarters** from Chicago to the Scottsdale Airpark Corporate Center by Nov. 1. A co-operative that purchases major appliances from manufacturers and then sells them to its member businesses, MARTA plans to hire between 15 and 20 workers, mostly from the local area.

Arby's Inc. will expand the operations of its **Western Region headquarters** in Phoenix when it moves Oct. 1 to new offices at the Anchor Center, 2232 E. Camelback Road. The new location, which will add about 5,000 square feet, will allow for support of franchise operations, in addition to the current 14-state regional base for company-owned stores. Arby's will employ about 20 people at the new Phoenix regional office when it's fully operational.

Retail giant **Wal-Mart** opened its **first two stores in the Valley** in early September — 800 W. Warner Road, Chandler, and 5845 W. Bell Road, Glendale — and expects to add four additional locations in the state by the end of the

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year and at least two more in 1991. The Arkansas-based-chain, which currently has 17 stores in Arizona, will open new stores this year in Peoria, Page, northeast Phoenix, and Yuma, and in Mesa and Prescott in '91.

Big 4 Restaurants Inc. of Phoenix is opening two eateries in Phoenix and one in Scottsdale this fall. Opening in early September in the Phoenix Plaza, Central Avenue and Thomas Road, will be a delicatessen-style cafeteria, **Cafe 66**, and a high-end restaurant with buffet and à la carte lunch and dinner menus, **Arizona Terrace**. **Aldo Baldo**, an Italian restaurant, is set to open in mid-October at the Scottsdale Fashion Square, Camelback and Scottsdale roads.

Bromar Arizona, a Phoenix food-brokerage company, is moving and expanding its Valley operation. Bromar will employ about 100 people when its moves into its new 23,000-square-foot building in Southbank Business Park near Sky Harbor International Airport.

The grocery-store wars have taken their toll on several hundred full-time employees of the Phoenix-based **Smitty's** supermarket chain. Smitty's, which laid off 300 workers in December and January as part of a restructuring plan, has **cut in half the hours of 300 workers** and **eliminated 8 percent of its meat department employees**. Smitty's has 24 stores in the Valley and employs about 6,000 people.

A San Diego-based women's clothing chain, **Charlotte Russe**, plans to open **four stores in Valley** — all in shopping malls — within the next year. Charlotte Russe, which specializes in fashions for women 18 to 40, will open its first location at Scottsdale Fashion Square in October, then follow with a store in the Paradise Valley Mall in November, and then open two more stores next year, one each in Metrocenter and Fiesta Mall.

Following up on a tentative announcement in December, **Ace Hardware Corp.** plans to build a **regional warehouse** in **Prescott Valley** that will employ 125 people and generate more than $2 million in salaries, fringe benefits, and taxes. The $9 million facility, which will initially have about 400,000 square feet — although it could be expanded to twice that size — will service Ace stores in the Southwest. Construction was set to begin in September with a tentative opening scheduled for late in 1991.

RDS Acquisition Corp., which is seeking to **take over 146 Revco drug stores** in Arizona, New Mexico, Texas, and Colorado, says it will locate its headquarters in Glendale at Revco's current Arizona home office at 5107 N. 51st Ave. RDS, which was created to buy the Revco stores, is awaiting approval from a federal bankruptcy judge. Eight-three of Revco's stores in Arizona would be affected.

R.H. Macy & Co. plans to **triple the size** of its **I. Magnin store at the Biltmore Fashion Square** in Phoenix, 24th Street and Camelback Road. Retail space in I. Magnin, a high-end speciality department store, will increase from 30,000 to 90,000 square feet when construction of its new building is completed in fall 1992.

The closing in October of a **Sears, Roebuck and Co. store** at The Colonnade shopping center, 20th Street and Camelback Road, and subsequent move to a new location at the Paradise Valley Mall, Tatum Boulevard and Cactus Road, will enable the department store chain to **increase its retail space** and ultimately **hire additional workers**. Sears, which will have 90,000 square feet (up 35,000) at its new location, has offered jobs to its 165 employees at The Colonnade store and expects its total work force to grow to 225.

SERVICES — **Lee Myles Transmissions of Arizona** is kicking a statewide **expansion program** into first gear with plans to open 22 service centers in the next four years. Expected to create 100 jobs when completed in 1994, the expansion will begin in the Phoenix and Tucson metropolitan areas, then include other Arizona cities such as Flagstaff, Goodyear, and Yuma. Lee Myles, a national franchise network based in New Jersey, currently has eight stores in the Valley.

The **White Mountain Apache Tribe** is seeking a $2 million loan to keep open its **20-year-old ski resort** in eastern Arizona, which lost $8.5 million last year. The Apache Sunrise Ski Resort was closed for the summer for the first time, and to offset losses the tribe has made payroll reductions in its other businesses, affecting about 300 employees. The closure of the ski facility, which has had as many as 225,000 skiers in one season, would also have a serious ripple effect on businesses in Pinetop-Lakeside and Show Low.

Officials of **Santa Fe Railway** and the **city of Prescott** are inching closer to **agreement to sell a 28-mile line of track** from downtown Prescott to an area known as Paulden near U.S. Highway 89. The city says two companies have expressed an interest in operating a combination tourist/freight train between the two locations, which could also spur industrial development in Chino Valley — about halfway between Prescott and Paulden — and provide transporation to the Prescott Airport.

The **Muscular Dystrophy Association (MDA)**, which announced late last year its plans to move from New York City

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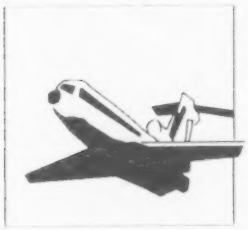
to Tucson, has **closed a deal on 7 acres of property** in the northern part of the city. MDA is expected to employ about 150 people in a planned 65,000-square-foot facility and also will help the local tourist industry because of 5,000 rooms it needs each year for various conventions.

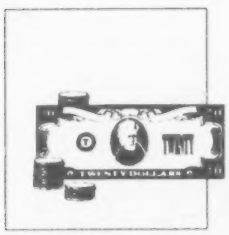
TRANSPORTATION, COMMUNICATIONS AND PUBLIC UTILITIES — Fiscal 1990 earnings for Phoenix-based **U-Haul International** fell by about one-half due to a decline in RV and general-equipment rentals, as well as sales of older equipment. Earnings for U-Haul, which employs about 2,000 people in Arizona, dropped from $36.2 million in fiscal 1989 to $18.5 million in fiscal '90, despite increased revenue of $22 million.



Pinnacle West Corp., parent company of Arizona Public Service Co. (APS), and **PacifCorp** in early September ended a power struggle over the state's largest utility and agreed to share power resources. Oregon-based PacifCorp., which had made four unsuccessful bids for Pinnacle West, was considering a hostile takeover before the agreement. In the process, APS announced two cost-cutting plans that will significantly reduce it current work force of 7,700.

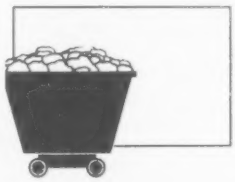
Evergreen Air Center plans to spend $20 million to **expand its aircraft-maintenance center** at Marana Air Park near Tucson. The center employs around 600 maintenance workers who service Boeing 747 cargo planes for parent-company Evergreen International Aviation and other cargo companies. Due to the expansion, Evergreen expects to add 500 additional employees by 1993.

FINANCE, INSURANCE AND REAL ESTATE — Officials in Arizona and Utah are wooing **Chase Manhattan Corp. of New York** for a planned **credit-card center** that will eventually employ 2,000 workers. Chase Manhattan, parent company of Chase Bank of Arizona, is looking at several sites around the Valley and Salt Lake City and expects to start operations sometime in 1992. Arizona officials are trying to set up a training program for potential employees as an incentive to lure the banking firm's credit-card operations.



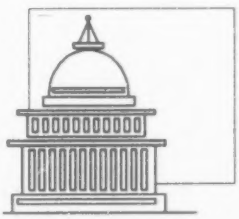
Caliber Bank of Arizona, which resulted from the merger of Century Bank and First Business Bank, is locating its **corporate headquarters** in Phoenix City Square, 3800 N. Central Avenue. Caliber, which will also operate its main branch at that location, expects to employ 65 to 70 people at the corporate center.

MINING — **Magma Copper Co.**, the second largest employer in southern Arizona (3,500 workers), is moving its **corporate headquarters** from San Manuel to Tucson by early November. Magma says it is making the move in order to provide better access to Tucson's airport and to allow mine operators "greater freedom to make day-to-day decisions without undue influence of corporate staff." About 50 employees are expected to be affected by the move.



The historic **Johnson Camp copper site** in Cochise County, which has been dormant since the mid-'80s, will **begin operation** in September. Tucson-based Arimetco Inc., which purchased the Johnson Camp copper property from Cyprus Mines in August 1989, has constructed a new solvent extraction-electrowinning plant at the mine, located about 15 miles east of Benson. A work force of 35 will be initially hired and is expected to produce 35,000 pounds of cathode copper a day.

GOVERNMENT — To accommodate skyrocketing enrollment, the University of Arizona has asked all of its departments to decrease budgets by 6 percent for the upcoming year in order to finance part-time teaching positions. The Tucson school is re-allocating $24 million for temporary instructors to offset a jump in enrollment from 35,600 last year to 37,000 this fall. Unfortunately, the effects from the budget shuffle will likely include hiring freezes and cuts of permanent personnel.



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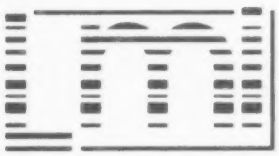

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